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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/714,860

11/18/2003

Dave James Cotton

87401.1720

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7590

09/16/2004

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EXAMINER

KRAMSKAYA, MARINA

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,860	COTTON, DAVE JAMES	
	Examiner	Art Unit	
	Marina Kramskaya	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/15/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold et al., US 5,468,091. Arnold discloses a device capable of inspecting pipes with a chassis (FIG 4, column 6 line 3-11), a propulsion means **15** (FIG. 7) for driving the chassis along the pipe, and a capacitive sensor means (column 6 lines 25 -31), capable of sensing lateral openings in the pipe such as branch connections (column 6 lines 63-67).

As for Claim 2, Arnold discloses a capacitive sensor where one plate is formed by the pipe itself, and the other plate is on the carrier that is inserted onto the pipe (column 2 lines 3-14).

As for Claim 3, Arnold discloses a sensor that can detect current, broadly interpreted as trickle current, passing through the capacitive sensor to the pipe (column 7 lines 12-18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4, 6, & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of view of Wiechern, WO 97/49947, and further in view of view of Moore, US 5,195,392

As per Claim 4, Arnold discloses the invention as applied to Claim 1 above.

Arnold does not disclose a cutting tool with its associated control and power means or the operator controlling the device.

Wiechern discloses a tool for cutting pipe liner, an actuator (movable cylinder) for moving the cutting tool relative to the chassis, electrical control and supply lines as a propulsion means, and whereby the cutting tool and the actuator are electrically controlled from a remote control location (abstract).

Moore discloses a pipe inspection device, electrically controllable by human operator using electrical control means **24** (FIG. 1).

It would have been obvious to modify Arnold to include a cutting tool for the pipe liner as taught by Wiechern in order to have a multi-task device that can cut the pipe

liner as well as detect the lateral opening, and a human operator is necessary, as taught by Moore, to accurately control the device.

As per Claim 6, Arnold and Wiechern disclose the invention as applied to Claim 4 above.

Arnold does not disclose an actuator means to move the sensor means relative to the chassis.

Further, Wiechern discloses a sensor capable of movement, relative to the chassis, by a movable cylinder **48** as the actuator means (abstract lines 16-24).

It would have been obvious to modify Arnold to include a actuator means to move the sensor as taught by Wiechern in order to facilitate the detection of lateral openings anywhere on the perimeter of the pipe.

As per Claim 13, Arnold discloses the invention as applied to Claim 1 above.

Arnold does not disclose a means rotating the sensor means about the longitudinal axis of the vehicle.

Wiechern discloses a means for rotating **48** the sensor about the longitudinal axis of the vehicle (abstract lines 16-17).

It would have been obvious to modify Arnold to include a means for rotating the sensor about the longitudinal axis of the vehicle as taught by Wiechern in order to facilitate the detection of lateral openings anywhere on the perimeter of the pipe.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Moore, US 5,195,392.

Arnold discloses the invention as applied to Claim 1 above.

Arnold does not disclose a camera to provide an image of the interior of the pipe.

Moore discloses a pipe-inspecting device with a camera means **50** mounted on it for imaging the interior of the pipe.

It would have been obvious to modify Arnold to include a camera device to give the operator a visual verification of the sensor data.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al. in view of Sullins et al., US 4,006,359.

Arnold discloses a pipe-inspecting device as applied to Claim 1 above.

Arnold does not disclose an electric motor drive for propulsion means.

Sullins discloses a pipe-inspecting device with a motor **100**, for propelling the device through a pipe (column 6 line 39).

It would have been obvious to include in Arnold's device a motor as taught by Sullins in order to increase speed as compared to the manual pushing machine as disclosed by Arnold.

Allowable Subject Matter

7. Claims 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 would be allowable since prior art teaches the use of the cutting means opposing the sensor means; however, prior art does not teach the use of the sensor means as a stabilizing means, whereby the engagement of the sensor means with the first part of the pipe provides a force which reacts to forces arising during a cutting operation. More commonly a mechanical component is used for stability purposes.

Claim 8 would be allowable since prior art teaches of the actuator means comprising a hydraulic ram powered by hydraulic fluid; however, prior art does not teach the use of pressurizing of the hydraulic fluid by an electrically operated pump mounted on the chassis of the vehicle and controllable by the control means.

Further, Claims 9-12 would be allowable as being dependent on Claim 8, whereby the prior or does not teach of the hydraulic pump mounted on the chassis and controllable by the control means.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Alft et al., Pub No. US 2003/0111268 A1, discloses a cutting tool with an electric control and a capacitive sensor. Hosohara et al., Patent No. JP

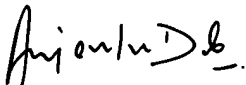
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03153458 A, discloses a pipeline inspection device on caterpillar tracks. Richardson, Patent No. US 4369713 A, discloses a pipeline inspection device with a hydraulic pump, hydraulic fluid, and a hydraulic ram.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Kramskaya whose telephone number is (571)272-2146. The examiner can normally be reached on M-F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nancy Le can be reached on (571)272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANJAN DEB
PRIMARY EXAMINER

MK

Marina Kramskaya
Examiner
Art Unit 2858

